

Claims

1. A control arrangement for the pressure medium supply of at least two hydraulic consumers, comprising a variable displacement pump arrangement which has a variable capacity, and comprising at least two adjustable meter-in orifices each associated with a respective one of the consumers and respectively adjustable in dependence on a target value set at a target value entry means through the intermediary of a control means, and comprising a means outputting a control signal to the variable displacement pump in dependence on the set target values, characterized by respective sensors provided in the pressure medium flow paths downstream from the meter-in orifices for detecting the individual load pressures, by a means for detecting the consumer having the highest load pressure based on the signals detected by the sensors and for controlling open the meter-in orifice associated with the consumer having the highest load pressure.
2. The control arrangement in accordance with claim 1, wherein an additional sensor is provided for detecting the pressure upstream from the meter-in orifices, and wherein the pressure drop across the meter-in orifices is determined with the aid of the means from the detected signals, and the actuation of the meter-in orifices is variable in dependence on this pressure drop, so that a desired pressure medium flow rate flows to the consumers.
3. The control arrangement in accordance with claim 1, wherein upstream or downstream from each meter-in orifice a pressure compensator is arranged which is subjected in the closing direction to the pressure

upstream from the meter-in orifice, and in the opening direction to the pressure downstream from the associated meter-in orifice.

4. The control arrangement in accordance with any one of the preceding claims, comprising an anti-cavitation valve for replenishing pressure medium on the low-pressure side of the consumers.
5. The control arrangement in accordance with any one of the preceding claims, wherein the target value entry means is at least one joystick.
6. A method for actuating a control arrangement for the pressure medium supply of at least two hydraulic consumers, comprising a variable displacement pump arrangement which has a variable capacity, and comprising at least two adjustable meter-in orifices each associated with a respective one of the consumers and respectively adjustable in dependence on a target value set at a target value entry means through the intermediary of a control unit, and comprising a means outputting a control signal to the variable displacement pump in dependence on the set target values, characterized in that the individual load pressures of the consumers are detected, and the meter-in orifice associated with the consumer having the highest load pressure is controlled to open completely.
7. The method in accordance with claim 6, wherein a pressure upstream from the meter-in orifices is detected, and from this the pressure drop across the respective meter-in orifices and the individual load pressures is determined, and the setting of said meter-in orifices is varied such that a desired

pressure medium flow rate distribution across the meter-in orifices is established.

8. The method in accordance with claim 6 or 7, wherein in the case of an insufficient supply the cross-sections of flow of the meter-in orifices associated with the consumers having the lower load pressure are reduced, preferably at the ratio of the maximum pump capacity to the target cumulative flow rate.
9. The method in accordance with any one of claims 6 to 8, wherein a pulling load is recognized by evaluating the signals detected by the sensors, and the variable displacement pump is regulated down accordingly.
10. The method in accordance with any one of claims 6 to 9, wherein in the case of a concurrent actuation of several consumers, their load pressures are compared, and in the case of a differential load pressure being less than the control Δp of the pressure compensator, the meter-in orifice associated with the consumer having the lower load pressure is controlled to open to such a degree that this load pressure difference is compensated.